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```
1 0001 0 MODULE STR$COMPARE_EQL (      ! Compare 2 strings-contents and length
2 0002 0
3 0003 0      IDENT = '1-005' ! File: STR$COMEQL.B32 Edit RKR1005
4 0004 0
5 0005 0      ) =
6 0006 1 BEGIN
7 0007 1
8 0008 1
9 0009 1 *****
10 0010 1 *
11 0011 1 *  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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26 0026 1 *  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
27 0027 1 *  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
28 0028 1 *
29 0029 1 *
30 0030 1 *****
31 0031 1
32 0032 1
33 0033 1 ++
34 0034 1 FACILITY: String support library
35 0035 1
36 0036 1 ABSTRACT: This module takes 2 input strings of any supported class
37 0037 1 and dtype and returns a 0 if string1 is the same as string2 in both
38 0038 1 length and contents and a 1 otherwise
39 0039 1
40 0040 1 ENVIRONMENT: User mode, AST level or not or mixed
41 0041 1
42 0042 1 AUTHOR: R. Will, CREATION DATE: 26-Mar-79
43 0043 1
44 0044 1 MODIFIED BY:
45 0045 1
46 0046 1 R. Will, 26-Mar-79 : VERSION 01
47 0047 1 1-001 - Original
48 0048 1 1-002 - String cleanup, change name to STR$COMEQL. RW 5-Nov-79
49 0049 1 1-003 - Make routine sensitive to additional classes of string
50 0050 1 descriptors by using $STR$GET_LEN_ADDR to extract length and
51 0051 1 starting addresses from descriptors. Remove string
52 0052 1 interlocking code. RKR 13-APR-81
53 0053 1 1-004 - Speed up code. RKR 13-OCT-1981.
54 0054 1 1-005 - Use SWITCHES ZIP to avoid some of the cross-jumping code
55 0055 1 that would normally get generated this module.
56 0056 1 RKR 18-NOV-1981.
57 0057 1 --
```


STR\$COMPARE_EQL
1-005

; 58

0058 1 !<BLF/PAGE>

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VAX-11 Bliss-32 V4.0-742
[LIBRTL.SRC]STR\$COMPARE_EQL.B32;1

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STR
1-0

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60      0059 1  |
61      0060 1  | SWITCHES:
62      0061 1  |
63      0062 1  |
64      0063 1  | SWITCHES ADDRESSING MODE
65      0064 1  |             (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
66      0065 1  |
67      0066 1  | SWITCHES ZIP ;
68      0067 1  |
69      0068 1  | LINKAGES
70      0069 1  |
71      0070 1  | REQUIRE 'RTLIN:STRLNK';           ! Linkage to LIB$ANALYZE_DESC_R3
72      0255 1  |
73      0256 1  |
74      0257 1  | TABLE OF CONTENTS:
75      0258 1  |
76      0259 1  |
77      0260 1  | FORWARD ROUTINE
78      0261 1  |     STR$COMPARE_EQL;           ! compare 2 strings, same length and contents
79      0262 1  |
80      0263 1  |
81      0264 1  | INCLUDE FILES:
82      0265 1  |
83      0266 1  |
84      0267 1  | REQUIRE 'RTLIN:RTLPSCT';           ! Declare PSECTS code
85      0362 1  | REQUIRE 'RTLIN:STRMACROS';         ! use string macros to write code
86      1278 1  | LIBRARY 'RTLSTARLE';             ! STARLET library for macros and symbols
87      1279 1  |
88      1280 1  |
89      1281 1  | MACROS: NONE
90      1282 1  |
91      1283 1  |
92      1284 1  |
93      1285 1  | EQUATED SYMBOLS: NONE
94      1286 1  |
95      1287 1  |
96      1288 1  |
97      1289 1  | PSECT DECLARATIONS
98      1290 1  |
99      1291 1  |
100     1292 1  | DECLARE_PSECTS (STR);
101     1293 1  |
102     1294 1  |
103     1295 1  | OWN STORAGE: NONE
104     1296 1  |
105     1297 1  |
106     1298 1  |
107     1299 1  | EXTERNAL REFERENCES
108     1300 1  |
109     1301 1  | NONE
```



```
111 1302 1 GLOBAL ROUTINE STR$COMPARE_EQL ( ! compare strings-same len and contents
112 1303 1
113 1304 1     STRING1, ! pointer to 1st string descriptor
114 1305 1     STRING2 ! pointer to 2nd string descriptor
115 1306 1
116 1307 1     ) : =
117 1308 1
118 1309 1 ++
119 1310 1 FUNCTIONAL DESCRIPTION:
120 1311 1
121 1312 1     This routine takes two source strings of any supported
122 1313 1     dtype and class, compares their length and contents and returns
123 1314 1     a 0 if both are the same (length and contents)
124 1315 1     and a 1 otherwise.
125 1316 1
126 1317 1 FORMAL PARAMETERS:
127 1318 1
128 1319 1     STRING1.rt.dx     pointer to 1st string descriptor
129 1320 1     STRING2.rt.dx     pointer to 2nd string descriptor
130 1321 1
131 1322 1 IMPLICIT INPUTS:
132 1323 1
133 1324 1     NONE
134 1325 1
135 1326 1 IMPLICIT OUTPUTS:
136 1327 1
137 1328 1     NONE
138 1329 1
139 1330 1 ROUTINE VALUE:
140 1331 1
141 1332 1     MATCH.wl.v       0 if same length and contents, otherwise 1
142 1333 1
143 1334 1 SIDE EFFECTS:
144 1335 1
145 1336 1     May signal STR$_ILLSTRCLA on bad string class
146 1337 1
147 1338 1 --
148 1339 1
149 1340 2 BEGIN
150 1341 2
151 1342 2 LOCAL
152 1343 2     MATCH;           ! Local to return match or nomatch
153 1344 2
154 1345 2     MAP STRING1 : REF $STR$DESCRIPTOR;
155 1346 2     MAP STRING2 : REF $STR$DESCRIPTOR;
156 1347 2
157 1348 2 ++
158 1349 2 Find out if this is a static or dynamic string to optimize the code
159 1350 2 path
160 1351 2 --
161 1352 2 IF (.STRING1 [DSC$B_CLASS] LEQU DSC$K_CLASS_D) AND
162 1353 2     (.STRING2 [DSC$B_CLASS] LEQU DSC$K_CLASS_D)
163 1354 2 THEN
164 1355 2     BEGIN
165 1356 2         ++
166 1357 2         ! If lengths are equal and contents are same match = 0,
167 1358 2         ! else match = 1
```

```
!-
IF (.STRING1 [DSC$W_LENGTH] EQLU .STRING2 [DSC$W_LENGTH] )
THEN ! lengths equal
  BEGIN
    +
    Use same length field to force generation of a CMPC3. This
    is ok since lengths are the same.
    -
    IF (CH$EQL
      (.STRING1 [DSC$W_LENGTH], .STRING1 [DSC$A_POINTER],
       .STRING1 [DSC$W_LENGTH], .STRING2 [DSC$A_POINTER] ) )
    THEN MATCH = 0 ! both length and contents match
    ELSE MATCH = 1 ! lengths match, contents don't
    END
  ELSE MATCH = 1; ! lengths don't match
  END
ELSE
  BEGIN
  LOCAL
    S1_LENGTH, ! length of first string
    S1_ADDR, ! address of 1st data byte of first string
    S2_LENGTH, ! length of second string
    S2_ADDR; ! address of 1st data byte of second string
    +
    Get the associated lengths and addresses of the strings
    -
    $STR$GET_LEN_ADDR (STRING1, S1_LENGTH, S1_ADDR) ;
    $STR$GET_LEN_ADDR (STRING2, S2_LENGTH, S2_ADDR) ;
    +
    If lengths are equal and contents are same match = 0,
    else match = 1
    -
    IF (.S1_LENGTH EQLU .S2_LENGTH ) ! lengths = ?
    THEN
      BEGIN
        IF (CH$EQL (.S1_LENGTH, .S1_ADDR, ! contents = ?
                   .S1_LENGTH, .S2_ADDR) ) ! use same length field
        ! to force generation of
        ! CMPC3 compare. Its ok
        ! since we know
        ! S1_LENGTH = S2_LENGTH
        THEN MATCH = 0 ! both length and contents match
        ELSE MATCH = 1 ! lengths match, contents don't
        END
      ELSE MATCH = 1; ! lengths don't match
    END;
  RETURN .MATCH;
END; ! End of STR$COMPARE_EQL
```


				.TITLE	STR\$COMPARE_EQL	
				.IDENT	\1-005\	
				.EXTRN	STR\$ANALYZE_SDESC_R1	
				.PSECT	_STR\$CODE,NOWRT, SHR, PIC,2	
				.ENTRY	STR\$COMPARE_EQL, Save R2,R3,R4,R5	
54	08	AC	D0 00002	MOVL	STRING2, R4	: 1302
50	04	AC	D0 00006	MOVL	STRING1, R0	: 1361
		52	D4 0000A	CLRL	R2	: 1352
02	03	A0	91 0000C	CMPB	3(R0), #2	
		19	1A 00010	BGTRU	1\$	
		52	D6 00012	INCL	R2	
51	08	AC	D0 00014	MOVL	STRING2, R1	: 1353
02	03	A1	91 00018	CMPB	3(R1), #2	
		0D	1A 0001C	BGTRU	1\$	
64		60	B1 0001E	CMPW	(R0), (R4)	: 1361
		44	12 00021	BNEQ	7\$	
04	B4	04	B0	CMPC3	(R0), @4(R0), @4(R4)	: 1369
		60	29 00023	BRB	6\$	
		36	11 00029	BLBC	R2, 2\$: 1390
09		52	E9 0002B	MOVZWL	(R0), S1_LENGTH	
52		60	3C 0002E	MOVL	4(R0), S1_ADDR	
53	04	A0	D0 00031	BRB	3\$	
		09	11 00035	JSB	STR\$ANALYZE_SDESC_R1	
		00	16 00037	MOVQ	R0, R2	
52	00000000G	50	7D 0003D	CMPB	3(R4), #2	: 1391
02		A4	91 00040	BGTRU	4\$	
		09	1A 00044	MOVZWL	(R4), S2_LENGTH	
50		64	3C 00046	MOVL	4(R4), S2_ADDR	
51	04	A4	D0 00049	BRB	5\$	
		09	11 0004D	MOVL	R4, R0	
50		54	D0 0004F	JSB	STR\$ANALYZE_SDESC_R1	
		00	16 00052	CMPL	S1_LENGTH, S2_LENGTH	: 1398
50	00000000G	52	D1 00058	BNEQ	7\$	
		0A	12 0005B	CMPC3	S1_LENGTH, (S1_ADDR), (S2_ADDR)	: 1401
61		52	29 0005D	BNEQ	7\$	
		04	12 00061	CLRL	MATCH	: 1407
		55	D4 00063	BRB	8\$	
		03	11 00065	MOVL	#1, MATCH	: 1410
55		01	D0 00067	MOVL	MATCH, R0	: 1414
50		55	D0 0006A	RET		: 1415
		04	0006D			

; Routine Size: 110 bytes, Routine Base: _STR\$CODE + 0000

STR\$COMPARE_EQL
1-005

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[LIBRTL.SRC]STR\$COMEQL.B32;1

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: 226 1416 1 END
: 227 1417 0 ELUDOM

!End of module

PSECT SUMMARY

: Name Bytes Attributes
: _STR\$CODE 110 NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

Library Statistics

: File Total Symbols Loaded Percent Pages Mapped Processing Time
: _\$255\$DUA28:[SYSLIB]STARLET.L32;1 9776 4 0 581 00:00.8

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:STR\$COMEQL/OBJ=OBJ\$:STR\$COMEQL MSRC\$:STR\$COMEQL/UPDATE=(ENH\$:STR\$COMEQL
:)

: Size: 110 code + 0 data bytes
: Run Time: 00:05.6
: Elapsed Time: 00:17.5
: Lines/CPU Min: 15291
: Lexemes/CPU-Min: 37834
: Memory Used: 91 pages
: Compilation Complete

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VAX/VMS V4.0

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